Geography's Impact on the Success of Focused Local Drug Enforcement Operations

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Abstract—This paper evaluates a natural experiment created by simultaneous attempts to eradicate street markets for illicit drugs in two areas of Hartford, Connecticut. The target markets were comparable in size and nature except for some geographic factors, and the interventions were nearly identical. Nevertheless, the outcomes were strikingly different, suggesting that geographic factors may influence the success of local drug enforcement operations. This paper reviews Hartford's experience and examines some data that seem to support this hypothesis.

INTRODUCTION

Drug enforcement operations that are geographically focused on a single neighborhood are currently a favored tactic, but they have a mixed track record. Some have been highly successful while others have failed. Given that these operations require an enormous investment of police and community resources, understanding their impact and the level of resources they require is critical. The better these factors are understood, the more effective operations can be.

Unfortunately, why some efforts succeed while others fail is currently not well understood. Drug policy experts have typically stressed three broad factors in explaining outcomes of local drug enforcement efforts. The first two are (1) the size and type of drug market and (2) the amount and type of enforcement. More specifically, some experts have focused on the ratio of enforcement to market size, including the achievement of a critical ratio of narcotics agents to drug users [8] and the application of sufficient pressure to drive the market below a minimum viable size [3, 5]. A third key factor is community support; in particular, obtaining residents' involvement and inter-agency cooperation with other city entities [7, 12].

While this paper does not dispute the importance of these factors, it suggests that geography may also play a key role. Two apparently similar markets can respond very differently to roughly similar interventions if their physical surroundings are different. In fact, this occurred in the case study presented here, in Hartford, Connecticut during the summer of 1990.

After reviewing arguments in favor of focused drug enforcement operations, this paper describes COMPASS, Hartford's principal program for attacking street-level drug markets. It then examines possible explanations as to why COMPASS realized greater success in one of the initial two areas in which it was implemented. The analysis considers both traditional success factors (i.e. size and type of drug market, amount and type of enforcement, and community support) as well as geographic factors. The paper concludes by suggesting that geographic factors can play a role in the success of focused local drug enforcement operations.

THEORETICAL JUSTIFICATION FOR CRACKDOWNS

Reuter and Kleiman [17], Moore and Kleiman [14], and Kleiman [9] have discussed the relative advantages of investigative enforcement aimed at high-level dealers and street-level enforcement

directed at retail markets. In general, they found that retail enforcement offers some distinct advantages.

Simply stated, the theory holds that high-level enforcement affects price more than availability. It increases the cost of distributing drugs because dealers must pay higher wages to compensate for the increased risk of incarceration (both to themselves and their workers), for replacement drugs, and for measures taken to avoid arrest. These costs shift back the supply curve for drugs, increasing prices and thereby reducing consumption. In contrast, except perhaps in small towns, high-level enforcement is unlikely to significantly affect availability because there are many lateral connections in the distribution networks.

There are drawbacks to following an enforcement strategy that acts principally by raising prices. Most obvious is that if demand for drugs is relatively price inelastic, raising prices would increase the amount of money spent on drugs. This would, in turn, increase criminals' revenues, impoverish users, and possibly increase property crime committed to raise money for drug purchases.† While the elasticity of demand for drugs is not known, Reuter and Kleiman [17, pp. 293–300] and Reuter et al. [16, pp. 20–23] both argue that it is relatively inelastic; Silverman and Spruill [18] found that the elasticity of demand for heroin in Detroit was -0.267; and the central tendency of the elasticities of demand for the two most commonly used licit drugs, tobacco and alcohol, in studies reviewed by Manning et al. [11] was -0.5. Hence, it is quite plausible that successful high-level enforcement that seeks to reduce consumption by raising prices may have substantial detrimental side effects.

Local street-enforcement, on the other hand, is not generally thought to affect the price of drugs. Rather, its beneficial effect comes from making purchase more difficult by reducing drug availability. Often, this is referred to as increasing the search time costs of obtaining drugs [13]. These costs, in the form of time, inconvenience, risk of arrest for customers, risk of being mugged, and so on, are real costs to the user. Presumably they reduce consumption, but do not translate into monetary gains to the dealers. Hence, when search time costs rise, consumption and user spending both fall. (See [8; 9, Chap. 6] for a more detailed exposition of this argument.)

The main drawback to traditional, dispersed street-enforcement operations is the number of arrests required to make an impact. There are on the order of three-quarters of a million street dealers, [17, p. 294] so that concerted efforts to arrest street-level dealers in every market can swamp the already overburdened criminal justice system.‡ Furthermore, theory, evidence, and intuition suggest that limited local efforts spread thinly over all markets have little impact on any of them.

One response to these circumstances has been to focus local enforcement operations on a limited target. This is commonly known as a "crackdown." The hope is that the beneficial effects of local enforcement can be achieved, at least in those limited areas, without overwhelming the criminal justice system.

Additionally, focused efforts may benefit from economies of scale in enforcement. The balloon model of local drug enforcement [1, 3, 5] suggests that the marginal benefit per unit of effort applied to a given market is an increasing function of the amount of effort applied. For example, one might accomplish more by allocating two detectives to one market than by sending them to two separate markets. Obviously, equity arguments favor not neglecting the second market completely, but if the economies of scale are sufficiently large, gains in efficiency might outweigh these concerns of equity.

More generally, one should consider the "optimal theory of search," developed originally by Bernard Koopmans during World War II to locate and destroy enemy submarines and used during the last 20 years in a wide variety of settings. It suggests that optimal deployment of a fixed amount of resources over space and time should have the "massive intervention" property. That is, with a fixed amount of resources, it is better at any one time to concentrate your resources in a small

[†]There is some evidence [2, 18], albeit not conclusive, suggesting that rising prices lead to more property crime.

[‡]The burden that drug enforcement in general has placed on the criminal justice system is striking. The rate of drug-related arrests per 100,000 inhabitants in cities with populations over 100,000 rose by 130% between 1980 and 1989 [10, p. 455], and the number of offenders sentenced in U.S. district courts rose more than 250% over the same period [10, p. 480]. Press [15] documents the particular effect of crackdowns on New York City, but New York is not alone. Washington, D.C.'s Operation Clean Sweep led to 47,000 arrests over 2½ years, swelling the number of people incarcerated; nevertheless, the program was later abandoned as a failure [12].

number of places in order to have maximum effect per unit of resource deployed. After positive results in the selected areas, the resources can then be redeployed to other problematic areas.

The Hartford approach

Hartford, Connecticut is a relatively small city with a big city drug problem. The city has a population of 138,000 and is small in land area (17.8 square miles) [19]. In many respects, it may be viewed as the urban core of a metropolitan area with a much larger population. Hartford's surrounding towns are primarily suburban communities with middle to upper income populations. In contrast, Hartford itself ranks fourth nationally in percent of residents living below the poverty line.

Throughout most of the 1980s, Hartford spread its drug-law enforcement resources more or less evenly throughout the city. In recent years, however, there was a growing sense that this strategy was not working. So Hartford decided to try a new approach, called COMPASS, that focused efforts on one or two neighborhoods at a time. Importantly, COMPASS is not simply a crackdown, but rather a community-wide reclamation initiative involving citizens and community groups, as well as local, state, and Federal agencies. A key catalyst in this effort was the National Institute of Justice's (NIJ) Drug Market Analysis Program, which funded a joint effort with the Hartford Police Department and Queues Enforth Development (QED), Inc. The NIJ funding was used to develop geographic-based information tools to help manage the enforcement efforts and to evaluate COMPASS interventions. The next section describes key elements of the COMPASS program.

KEY ELEMENTS OF THE COMPASS PROGRAM

The COMPASS program focuses a planned sequence of anti-drug resources on small target areas within the City of Hartford (see Fig. 1). These areas typically range in area from 10 to 60 city blocks. In a given target area, COMPASS operations can be divided into two phases—a "stabilization" phase and a "maintenance" phase. The goal of the stabilization phase is to eliminate street-level drug markets in the target area, primarily through a massive infusion of police resources, most notably the 18-person Crime Suppression Unit. This phase typically lasts 3–5 months. Assuming the stabilization phase is successful, the belief is that the reclaimed area can be "maintained" with a greatly reduced police presence through the active involvement of target area residents, community groups, and other city agencies.

Role of the police

The stabilization phase begins with approximately 4 weeks of undercover operations during which the police attempt to identify as many drug sellers operating in the target area as possible. This operation is carried out by both selected officers in the Crime Suppression Unit and detectives in the Vice and Narcotics Division. Arrest warrants obtained on identified individuals and search

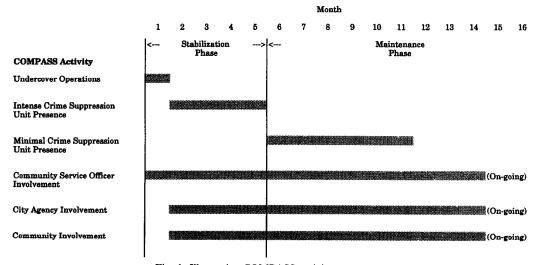


Fig. 1. Illustrative COMPASS activity sequence.

warrants obtained on selected residences are executed immediately before deployment of the uniformed Crime Suppression Unit in the target area. During the stabilization phase, this unit employs a variety of anti-drug tactics, including various types of patrol (e.g. roving, static, horse and foot) and special operations (e.g. reverse sting operations, buy-busts, surveillance busts and safety checks).

As noted earlier, the Crime Suppression Unit will typically be deployed in the target between 2-4 months. During the follow-up maintenance period, a small number of Crime Suppression officers—typically two—remain in the target area. The balance of Crime Suppression officers is moved to other target areas.

Another type of police resource deployed in target areas is the Community Service Officer (CSO), who plays an important role in both the stabilization and maintenance phases of the reclamation process. Perhaps the key goal of the CSO is to organize community resources in order to prevent and reduce crime and to serve as a conduit for two way communication between the police department and target area residents and organizations. Other CSO responsibilities include (1) meeting regularly with residents and business persons within the area to help identify those crime and order maintenance problems of greatest concern to the community; (2) working with existing blockwatch associations and other citizen groups on the development of neighborhood crime prevention programs; (3) conducting public education programs on crime prevention geared to the needs of the target area; and (4) developing strategies with the Crime Suppression Unit for dealing with key crime and order maintenance problems within the neighborhood. Importantly, the CSO assigned to the target area has a local office in that area, so that residents have easy access. Further, residents can reach the CSO via a direct telephone line to the local office, rather than through the main police department telephone number.

Role of the non-police agencies and community organizations

As Kelling and Wilson [6] argue, crime is determined by more than the number of criminals and the level of police presence. Visible signs of disorder ("broken windows") seem to encourage crime. Recognizing that the police are not the only ones who can and should deal with this situation, the COMPASS program actively enlists the support of non-police agencies and community organizations. In fact, COMPASS can be viewed as an intensive form of problem-focused community policing.

City agencies can contribute to the reclamation efforts in a number of ways, depending on the specific needs of the target area and its residents. For example, if there are problems with lack of security in a building—resulting in people using drugs in the stairwell or lobby—the city can force the landlord to secure the building. If a landlord is knowingly renting to tenants who are dealing drugs out of their apartment, these tenants can be evicted. The city can provide the necessary line services in the target areas so that the physical condition of the target area improves. The city can improve the condition of target area playgrounds (e.g. repair or replace existing swings, build new playground equipment, and remove trash and broken glass from the area) and expand after-school recreational programs. The city can also provide needed human services in the target areas, particularly job training, day care facilities, and drug treatment. Relatedly, if there are public housing projects in the target area, the involvement and cooperation of the local housing authority becomes critical to the success of reclamation efforts. This is the case since the Housing Authority has its own maintenance staff, performs its own garbage pickup, and, importantly, has the authority to evict tenants convicted of drug charges.

Community support is also critical to the success of reclamation efforts. For this reason, a strong community organization is currently a prerequisite for selection as a target area. The reclamation effort depends on key target area community groups accomplishing a number of tasks, including organizing meetings and public forums, disseminating information to target area residents, gathering and reporting information to the Police Department, and monitoring the performance of city agencies. Publicizing public forums is particularly important, as the Police Department periodically conducts open meetings with target area residents to report on reclamation progress and to enlist residents' support in the reclamation efforts. In this regard, the Police Department depends on the key target area organizations to ensure large turnouts for these meetings.

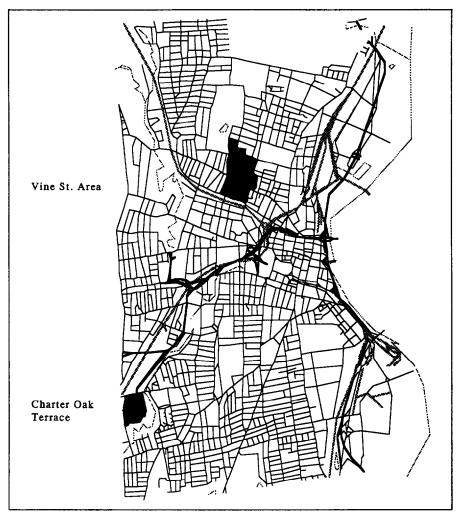


Fig. 2. Initial COMPASS target areas.

CHARTER OAK TERRACE AND THE VINE ST. AREAS

The first two neighborhoods selected as COMPASS targets were the Vine St. area and the major portion of a housing project known as Charter Oak Terrace (COT), both shown in Fig. 2. Prior to COMPASS, both these areas were considered major open-air drug markets. As shown in Fig. 3, the Vine St. target area is a 16-block region centered around the Vine St. School, but more or less arbitrarily carved out of Hartford's north end; it has no natural boundaries. In contrast, the COT target area (see Fig. 4) is physically isolated; it is bounded on the east and south by the Park River, on the west by railroad tracks, and on the north by Interstate 84. There are only four roads leading into and out of the area. (The remaining part of the Charter Oak Terrace, which was not part of the target area, is on the other side of the Park River and, hence, is physically separated from the target area.)

The Vinc St. area is composed of both three-story apartment buildings and multi-family houses. COT, on the other hand, is composed exclusively of two-story public housing buildings. In both areas, the most common drug sold was cocaine, with very little crack in either location. Judging by the number of drug arrests from December 1989 to March 1990, the two areas also experienced roughly equivalent enforcement pressure: an average of 16.5 and 17.5 drug arrests, respectively, were made each month during that 4-month period in COT and the Vine St. areas.

The COMPASS program began in April 1990 with 4 weeks of preparatory undercover work in the two target areas leading to 55 arrests of suspected drug dealers. Next, the uniformed Crime

Suppression Unit, supplemented during the first 3 months of the program by 5 State Highway Patrol Officers and 4 mounted patrol units, established a roughly 6 day a week, 16 hours a day visible presence in the two neighborhoods. These officers employed a variety of tactics, including roving, static, and foot patrols, reverse sting operations, buy-busts, surveillance busts, and vehicle safety checks. In total, between April 19 and November 5, 1990, the number of officer-hours spent in COT and the Vine St. areas was 12,005 and 13,245, respectively.

COMPASS' Impact in the target areas

By the end of the stabilization phase of the COMPASS program in early November 1990, there was general agreement among persons involved in the program that COMPASS was much more successful, short-term, in COT than in the Vine St. area. For example, a survey of members of the Crime Suppression Unit yielded the following results:

- 15 of the 18 respondents felt that COT residents were pleased with the results of the COMPASS program in their area, while only 3 of the respondents felt that Vine St. area residents were pleased with the results in their area. 17 of the respondents felt COT residents were now less afraid to be outside; only 10 felt that Vine St. area residents were now less afraid to be outside.
- Virtually all respondents felt that significant progress had been made in COT: 17 felt that police—community relations had been improved; all 18 felt that there was less drug dealing; 15 felt that, overall, physical conditions had improved; and 16 felt that COT was now a more pleasant place to live.
- The short-term impacts in the Vine St. area were mixed. While 9 of the respondents felt police-community relations had been improved and 12 felt there was less drug dealing in

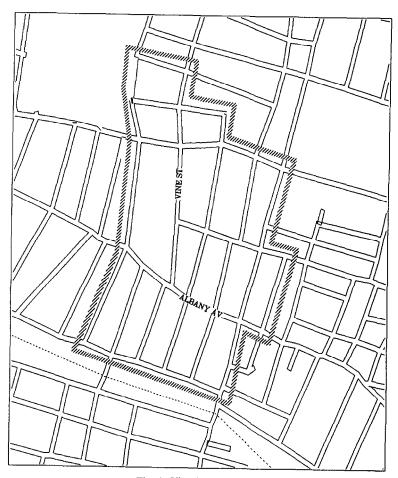


Fig. 3. Vine St. target area.

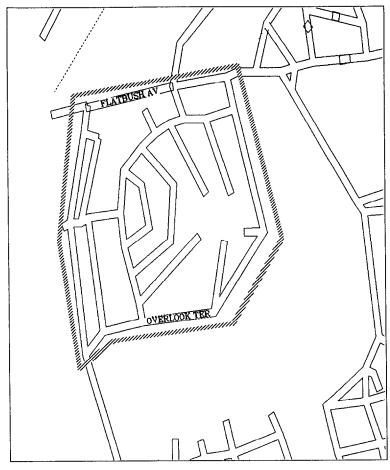


Fig. 4. Charter Oak Terrace target area.

the area, only 5 felt that the Vine St. area physical condition had been improved and only 3 felt that the Vine St. area was now a more pleasant place to live.

This is not to say that the Crime Suppression Unit felt that nothing was accomplished in the Vine St. area. These officers, and, in fact, the entire Hartford Police Department, were particularly pleased by the dramatic decrease in the number of reported drive-by shootings in the Vine St. area, as well as in COT.

Target area residents also agreed that COMPASS succeeded more in COT than in the Vine St. area, as measured by door-to-door surveys in the two areas in September 1990. In conducting these surveys, it was critical to survey residents on all street segments in both target areas, as it was clear, particularly in the Vine St. area, that the level of drug activity varied greatly from street to street. For this reason, three to four addresses on each street segment were randomly selected. From previous experience, we knew that the non-response rate for questions concerning drug activity would be significant. To help mitigate this problem, each survey was co-sponsored by local neighborhood organizations in the target areas and survey operators prominently displayed an identification badge showing the logo of the organization.

Results of these citizen surveys confirmed the greater degree of success in COT. The typical comment from Vine St. area residents was, "Yes, things did improve during the past few months, but not nearly as much as we expected and hoped for." COT residents, on the other hand, were overwhelmingly positive about COMPASS and how it had significantly improved their neighborhood. For example, 83.7% of the 185 COT residents surveyed answered affirmatively to the question, "Do you think there is less violent crime in your neighborhood than there was 3 months ago?", while only 38.5% of the 197 Vine St. area residents did so. These percentage differences are

statistically significant at the 0.001 level. Further, 84.7% of COT residents surveyed answered affirmatively when asked, "Do you think there are fewer people selling drugs in your neighborhood than there were 3 months ago?", compared with only 31.5% of Vine St. area residents. These percentage differences are also statistically significant at the 0.001 level.

Finally, it is worth noting the change in the number of drug arrests in the two areas since April 1990. As shown in Fig. 5, in the 4 months prior to April 1990, the two areas averaged roughly equal numbers of drug arrests. From the period May 1990 to December 1990, however, an average of only 4.1 drug arrests were made in COT each month, while an average of 16.9 drug arrests were made each month in the Vine St. area. As noted above and shown in Fig. 5, the two areas received roughly equivalent enforcement pressure, so differences in that variable cannot explain the differences in the number of drug arrests.

EXPLAINING DIFFERENCES IN IMPACT BY TRADITIONAL MEASURES

Definitive explanations of why the COMPASS program was so much more successful in COT than it was in the Vine St. area were difficult to ascertain, but the next two sections discuss several plausible hypotheses and conclude that differences in local geography played an important if not decisive role.

It was noted in the introduction that drug policy experts have typically focused on three broad factors in explaining outcomes of local drug enforcement efforts—the size and type of drug market, the amount and type of enforcement, and community support. Regarding the first two factors, there do not appear to be significant differences between COT and the Vine St. area. Among Police Department personnel, there was no consensus opinion on whether COT or the Vine St. area had the larger drug market prior to COMPASS. Generally, the Crime Suppression Unit officers thought that Charter Oak Terrace had the larger market, while many police supervisors felt that the Vine St. area had the larger market. The narcotics detectives generally believed that the total number of dealers was about the same but that the density of dealers was higher in COT.

There was also little difference in the amount and type of enforcement applied to each area. The police tactics used in the two areas were essentially identical and were implemented by the same officers, although the Vine St. area received about 10% more Crime Suppression Unit-officer-hours, as noted earlier. While it is generally agreed that COT received slightly more services from other city agencies, the overall level of involvement by the agencies, at least during the stabilization phase, was less than expected.

The third key factor cited by experts in determining the success of local drug enforcement operations is community support. In fact, in the survey of the Crime Suppression Unit noted above,

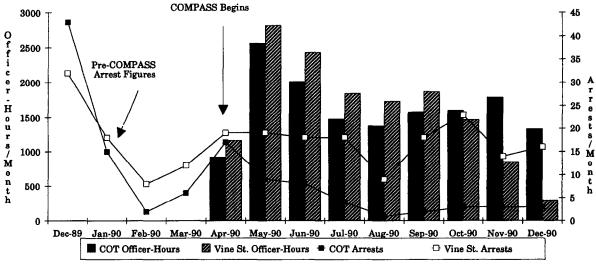


Fig. 5. Drug arrests and officer-hours in the target areas.

community support was the most frequently mentioned factor explaining why COMPASS was more successful in COT. Interviews and surveys of target area residents also suggest that there was more community support in COT. However, many officers in the Crime Suppression Unit felt that there was more support from Vine St. area residents before the COMPASS program began.

This raises the question, did COMPASS succeed in COT because of community support, or did community support emerge as a result of initial success in curbing the COT drug markets? It may be that in either neighborhood a cycle of greater success fostering greater community support generating greater success could have been established. However, the conditions necessary to trigger such a cycle were met in COT but not in the Vine St. area. If this were the case, it would be inappropriate to assign credit for the success in COT to community support and to blame the relative lack of success in the Vine St. area on that community's failure to give more generous support.

SUGGESTED GEOGRAPHIC REASONS WHY THE COT EFFORT WAS MORE SUCCESSFUL

One clear difference between the two target areas is geography. As shown in Figs 3 and 4, COT has well-defined physical boundaries, whereas the Vine St. area does not. In fact, the Crime Suppression Unit officers felt that, next to community support, well-defined physical boundaries was the most important factor in creating the greater success of COMPASS in COT. Distinct physical boundaries around a target neighborhood help for at least three reasons: they make it easier to control access to the market; they reduce the possibility of extremely local, temporary displacement; and they make it clear to both market participants and police exactly where the target area is.

Advantages of distinct geographic boundaries

Markets with limited access may be more vulnerable than target areas that have many streets crossing their boundaries. COT has just four (two-way) entrances, so that four road blocks can reach all traffic. Even without a formal roadblock, the police could observe everyone entering the area. Before COMPASS, dealers in COT made many sales to customers who drove in from other parts of the city or from outside the city. COMPASS effectively shut down that part of the market. It was not necessary to make a substantial number of arrests; the customers were simply unwilling to drive past a police officer, buy drugs, and then undergo police scrutiny on the way out of the neighborhood.

The extent to which people in COT felt the police presence was demonstrated by changes in their driving habits. At first, the officers could give tickets almost at will for violations ranging from cracked windshields to driving without a license. Soon, however, drivers entering COT were not only obeying these laws, they were also almost all wearing seat belts!

Without customers coming from outside COT, the market, or at least the visible market, collapsed. It is reasonably likely that some residents continued to use drugs and that some of them continued to buy those drugs in COT, but there was little reason for this dealing to take place outdoors. If the dealer and customer both lived in COT, they could simply go inside one or the other's apartment to complete the transaction. At any rate, visible street dealing, with all its undesirable side-effects, largely disappeared.†

Kennedy [7] reports a similar, if not more dramatic, example of this occurring in Houston's Link Valley neighborhood. There, the market collapsed even before the enforcement operations began because the program had been advertised ahead of time. Such dramatic success may not be attainable everywhere, however. Link Valley was very isolated, many of the customers were relatively affluent people arriving in cars, and most of them arrived by a single route (from a nearby highway exit).

In addition to allowing the police to control market access, physical boundaries can also limit spatial displacement caused by street-level enforcement. The dealers in COT were thus confined to a relatively small, well-defined territory. When people left the neighborhood, they generally did so in cars. In contrast, those in the Vine St. area could more easily walk a few blocks away when the officers were present, and then move back after they had left. That is, they could exercise an extremely local form of displacement. Indeed, many of the officers believed that this is exactly what happened in the Vine St. area.

Finally, physical boundaries help define the target area precisely. This, in turn, prevents police from straying into other areas, thereby diluting enforcement. It may also help deter users and dealers from entering the target area. If they know exactly where the boundary is, they have an incentive to not deal inside the area of increased enforcement. If they only know that risks have increased in some ill-defined region around a particular landmark, they may have less incentive to change their habits.

Other types of geographic boundaries

Accepting for the moment that geographic barriers were an important determinant of the success in COT, it is worth asking what things constitute geographic barriers that cordon off markets. In the case of COT, they include physical barriers: an Interstate highway, a railroad track, and a river. The geographic features relevant to drug markets need not, however, always be those that appear on a conventional map. For example, ethnic and gang boundaries that define "turf" may be equally important. A group of "Bloods" dealing in a region bounded by a combination of physical boundaries and "Crip" turf, may be just as "boxed in" as a group of dealers completely surrounded by physical boundaries.

To a lesser extent, crime-free, owner-occupied neighborhoods may be barriers in the sense that dealers cannot easily move their operations into such areas. Presumably, if they tried, their actions would attract considerable attention, with the residents of those relatively cohesive neighborhoods more likely to identify them, report them to the police, and testify against them than would the beleaguered residents of areas already torn by crime. On the other hand, such neighborhoods may be less constraining than a conventional physical barrier since dealers and/or users might be able to travel through them to get to the market or to flee the market.

Conversely, precinct and jurisdictional boundaries may offer special opportunities for dealers to displace temporarily in order to avoid pressure. For example, if the city of Kansas City, Missouri were to target a market along the border with Kansas City, Kansas (a border that does not follow any geographic feature whatsoever), then dealers might move across the state border until the action was over and then return. Zimmer [21] suggests that Manhattan's Lower East Side suffered from this phenomenon prior to Operation Pressure Point, since it is located at the juncture of three different precincts.

Other geographic factors

Other geographic factors may have played a role in the COT and Vine St. areas. As is shown in Fig. 4, COT is adjacent to an Interstate 84 entrance and exit. It was clear that this proximity to a major highway made COT an attractive drug market for out-of-town customers, a phenomenon also observed by Kennedy [7]. Because these customers are mobile, they may have been quick to change markets after COMPASS began in COT, making the COT market relatively vulnerable to COMPASS. Furthermore, these relatively affluent, car-mobile customers may have been more easily deterred by the threat of arrest than heavily drug dependent users who already have criminal records.

Another geographic difference between the two target areas is the amount of non-drug pedestrian and vehicular traffic. The COT area is an isolated residential area with no commercial establishments. The main street through the Vine St. area, in contrast, is not only a major thoroughfare, but an active business district. There are thus many reasons for persons to be walking or driving through the Vine St. area other than to buy or sell drugs. Extensive non-drug traffic can provide dealers with cover and "an excuse" to be in the area. So, all other things equal, it might be harder to "crack down" on areas with a good deal of legitimate through traffic and an active street life. In effect, the more non-drug related traffic there is, the lower the signal-to-noise ratio facing the police.

Policy consequences

One policy consequence of the above stated arguments is clear—jurisdictions should consider geography in the selection of drug target areas. This is not to say that sites with few or no natural geographic barriers, such as the Vine St. area, should be neglected as targets. Indeed, to a certain degree it may be possible to *create* geographic barriers or geographic isolation. That is, the community or the police may be able to increase the chances that a local drug enforcement operation will succeed by altering the physical environment of the target area. For example, in a "drive up" drug market (i.e. a drug market in which customers drive to the market and make the purchase while they are still in a vehicle), it may be worthwhile to alter the flow of vehicular traffic in the area by, for example, turning two-way streets into one-way streets or by turning selected streets into dead-ends by erecting physical barriers. The approach known as Crime Prevention Through Environmental Design [20] is, therefore relevant to local drug enforcement operations. It hypothesizes that proper design and effective use of the built environment can lead to a reduction in both crime and fear, as well as to an improvement in the quality of urban life.

CONCLUSIONS

A premise of local drug enforcement efforts has been that the benefits of such enforcement are a nonlinear function of the effort expended. More specifically, if the effort is beneath some threshold, relatively little will be accomplished. But, if efforts exceed that threshold, the market should collapse. Obviously it would be desirable to identify and understand the factors that determine these thresholds. The current paper suggests that local geography can be one such factor.

During the summer of 1990, Hartford, Connecticut conducted anti-drug operations of essentially identical nature, duration, and effort on two drug markets whose size and market characteristics were more similar than dissimilar. Despite this, the efforts were substantially more successful in one area than in the other. There are several possible explanations for this outcome, including differences in the ratio of enforcement to market size and differences in the communities that led to disparities in community support. It seems likely, however, that a contributing, if not determining consideration, was a series of differences in local geography. The operation was more successful in that neighborhood bounded by geographic barriers. These allowed the police to control access to the market; limited local, temporary displacement; and clearly defined the target area.

At this point, little has been demonstrated conclusively. However, our analysis suggests that geographic factors should be considered in the evaluation of drug enforcement operations. If this is done, more will become known about how geographic factors affect local enforcement operations and, hence, about how such operations should be managed. In the meantime, as the COMPASS program moves to other Hartford neighborhoods, the Hartford Police are explicitly considering neighborhood geography in their selection of new target areas.

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